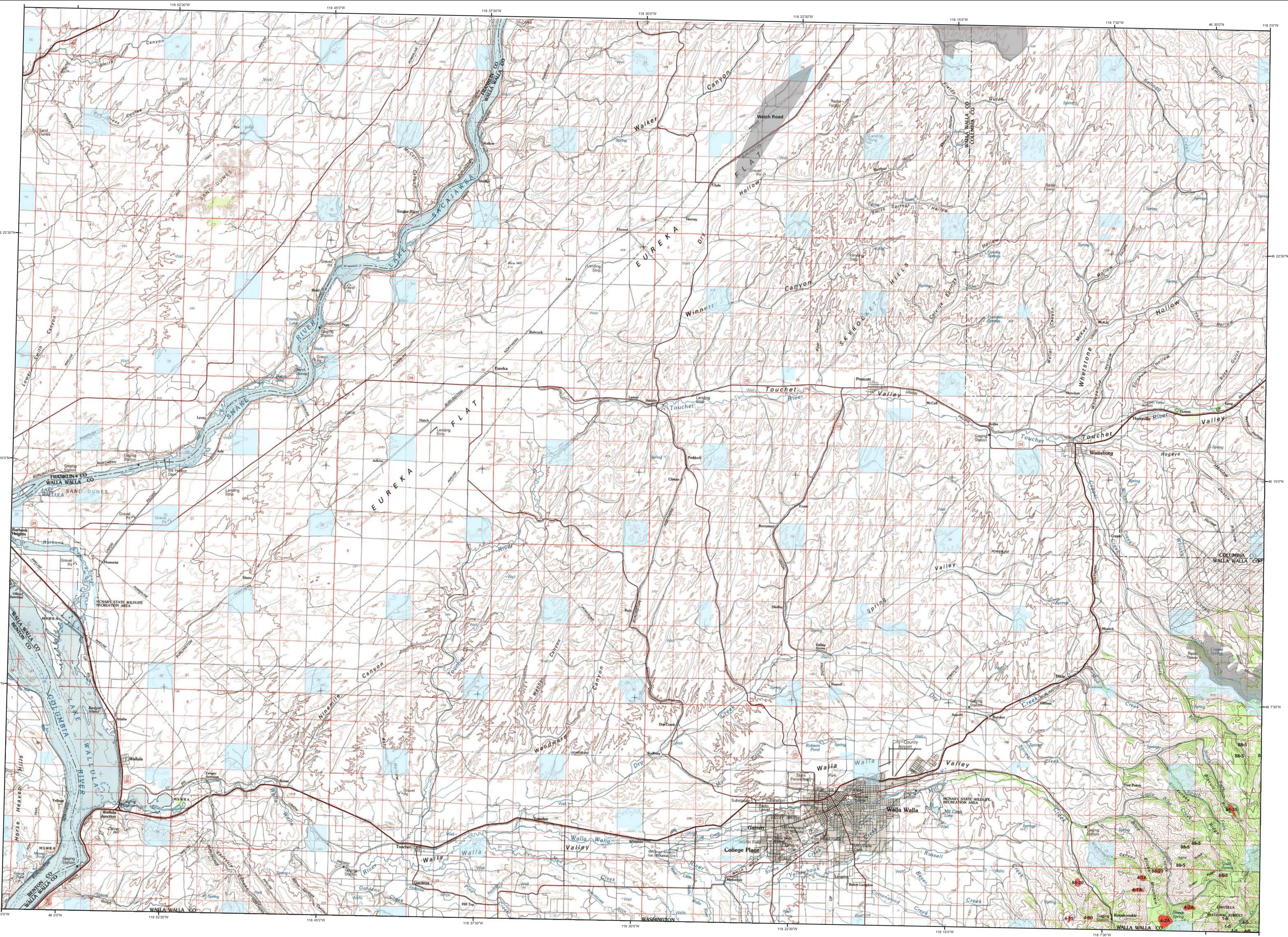


2006 Aerial Insect and Disease Survey

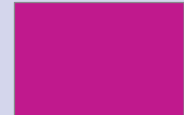
USGS 100K Quad: Walla Walla - A145118; 7F



Defoliators			Mortality Agents		
Code	Damaging Agent	Primary Host	Code	Damaging Agent	Primary Host
AS	Spotted spruce	White fir	1	Douglas-fir beetle	Douglas-fir
BB	Western blackheaded budworm	Hemlock, spruce, true fir	2	Douglas-fir engraver	Douglas-fir
BM	Modoc budworm	White fir	3	Spruce beetle	Spruce
BP	Sugar pine tortrix	Lodgepole, ponderosa pines	4	Fir engraver	True fir
BS	Western spruce budworm	True fir, Douglas-fir, spruce	5	Western balsam bark beetle	Sub-alpine fir
BY	Bynum's bight/Lophodermella	Western larch	6B	Mountain pine beetle	Whitebark pine
CH	Larch	Western larch	6K	Mountain pine beetle	Jeffrey pine
HL	Western hemlock looper	Western hemlock looper	6L	Mountain pine beetle	Lodgepole pine
LG	Green striped forest looper	Douglas-fir, Western hemlock	6P	Mountain pine beetle	Ponderosa pine
LL	Larch looper	Western larch	6S	Mountain pine beetle	Sugar pine
LS	Black pine needle scale	Ponderosa pine	6V	Mountain pine beetle	Western white pine
MD	Douglas-fir budmoth	Douglas-fir	7	Isis spp.	Ponderosa, lodgepole pines
ML	Larch budmoth	Western larch	8	Western pine beetle	Ponderosa pine
MN	Douglas-fir needle midge	Douglas-fir	8B	Western pine beetle	Pole-sized ponderosa pine
MS	Spruce budmoth	Spruce	9	Silver fir beetle	Silver fir, true fir
ND	Needle miner	Douglas-fir	BEAR	Bear damage	Conifer
NJ	Needle miner	Jeffrey pine	LW	Flatheaded wood borer	Douglas-fir, ponderosa pine
NK	Needle miner	Knobcone pine	PL	Black stain root disease	Douglas-fir, ponderosa pine
NL	Needle miner	Lodgepole pine	RD	Rod damage	Port Orford cedar root disease
NM	Needle miner	Ponderosa pine	WATR	Water damage	Conifer
NP	Needle miner	Sugar pine			All species
NS	Needle miner	True fir			All species
NT	Needle miner	Western white pine			Hardwoods
OL	Western oak looper	Oaks			
PS	Pine butterfly	Ponderosa pine			
PC	Pine needle cast	Ponderosa pine			
PH	Phantom hemlock looper	Hemlock, Douglas-fir			
PM	Pandora moth	Ponderosa, Jeffrey pines			
PN	Pine needle sheath miner	Ponderosa, Jeffrey pines			
PS	Pine needle scale	Pines			
RC	Needle cast	Western larch			
SA	Needle cast	Conifer			
SB	Sawfly	Douglas-fir			
SD	Sawfly	True fir			
SH	Sawfly	Hemlock			
SK	Sawfly	Knobcone pine			
SL	Sawfly	Lodgepole pine			
SM	Sawfly	Aspen			
SN	Swiss needle cast	Douglas-fir			
SP	Sawfly	Ponderosa pine			
SV	Sawfly	Western larch			
TA	Tent caterpillar, alder	Alder			
TC	Tent caterpillar, other	Hardwoods			
TM	Douglas-fir tussock moth	True fir, Douglas-fir			
TS	Tent caterpillar, aspen	Aspen			

USGS 100K Quad: Walla Walla - A145118; 7F
2006 Aerial Insect and Disease Detection Survey
Mapscale: 1:100,000
Date: December 5, 2006

Legend



Defoliating Agents



Mortality Agents



Other Damage



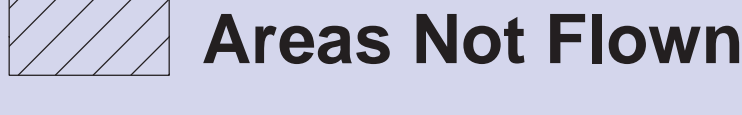
WadNR Managed Lands

Source: Washington Dept. of Natural Resources



2006 Large Fires

Source: Northwest Coordination Center



Areas Not Flown



The map base was created with TOPO! (Copyright 2001, National Geographic); available online at: www.ngmapstore.com

A data dictionary, digital copies of this map and ArcGIS insect and disease data are available at: www.fs.fed.us/r6/nr/fid/data.shtml

How the Aerial Surveys Are Conducted

Data represented on this map are based on trees visibly affected by forest insects and diseases detected and recorded during aerial survey flights conducted by the USDA Forest Service and the Washington Department of Natural Resources. Observers have just a few seconds to recognize the color difference between healthy and damaged trees of different species; diagnose causal agents correctly; estimate intensity; delineate the extent of damage; and precisely record this information on a georeferenced, digital map. Air turbulence, cloud shadows, distance from aircraft, haze, smoke and observer experience can all affect the quality of the survey. These data summaries provide an estimate of conditions on the ground and may differ from estimates derived by other methods.

The aerial survey provides information on the current status for many causal agents, and is important when examining insect activity trends by comparing historical and current survey data over large areas. Overview surveys are a 'snap shot' in time and therefore may not be timed to accurately capture the true extent or severity of a particular disturbance activity. Specially designed surveys with modified flight patterns and timing may be conducted to more accurately delineate the extent and severity of a particular disturbance agent. Special surveys, such as Swiss needle cast surveys, are conducted when resources are available to address situations of sufficient economic, political or environmental importance.

DIRECT ALL INQUIRIES TO:

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Forest Health
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-- OR --

USDA Forest Service, Region 6
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Forest Health Protection
PO Box 3623
Portland, Oregon 97208



****DISCLAIMER****
The insect and disease data presented should only be used as an indicator of insect and disease activity, and should be ground-checked for precise location, extent, severity and causal agent. Color coded polygons show locations where trees were recently killed or defoliated. Intensity of damage is variable and not all trees within coded polygons are dead or defoliated. The cooperators reserve the right to correct, update, modify or replace GIS products without notice. Using this map for purposes other than those for which it was intended may yield inaccurate or misleading results.